REMARKS

Reconsideration of the above-identified application in view of the present amendment is respectfully requested. By the present amendment, claims 14 and 21 are amended and claim 18 is canceled.

In regards to the objections of the drawings, amended replacement drawing sheets have been submitted to correct the objections. The Examiner should notice that elements 34 and 2 are now labeled on the Figure 1, and screw 16a is also labeled on Figure 2. Figure 1 also now includes a dashed line to show element 2, which is present in Figure 2. These amended drawings make the different views of Figure 1 and Figure 2 consistent.

In regards to the objection of the specification, the specification is amended to delete the phrase "Figure 2" that was in the abstract, as recommended by the Examiner. The specification is also amended to delete the phrase "not shown" on page 8, line 31 because the cylindrical element is actually present in the drawing. In addition, amendments to the specification have been made in two separate paragraphs. These paragraphs now include references to element 36, the axis of the roller 4, which is already present in Figure 1 and 2. Claim 18 is now cancelled, as suggested by the examiner.

In regards to the claim objections, claim 14 and 21 have been amended appropriately. Claim 14 now positively recites a cylindrical element to enable a relationship of friction to also be claimed. Claim 21 is amended and now includes "the" as opposed to "th."

In regards to the rejections under 35 U.S.C. 112, first paragraph, it is respectfully requested that the rejection of claims 14-26 be withdrawn. The attachment of the roller to the device is shown in Figure 2 by axis 36 and the screws 32 that are used to adjust the height of the axis 36. The attachment of the roller is described in the specification by the means to adjust the differences in the height, as described on page 14. Figure 3 is a schematic drawing and based on Figure 2 and the description in the specification, a person having ordinary skill in the art would appreciate that the roller 4 on the axis 36 is still connected to the body 34.

In regards to the rejections under 35 U.S.C. 112, second paragraph, it is respectfully requested that the rejection of claims 14-26 be withdrawn. Claim 14 has been amended to provide antecedent basis for "the friction" and now clearly states that there is a comparison between friction in two different locations.

In regards to the rejections under 35 U.S.C. 102(b), it is respectfully requested that the rejection of claims 14-16, 21, 22, 25, and 26 by anticipation from the Gibb et al. reference (Pat. No. 4,470,291) under 35 U.S.C. §102 be withdrawn. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Even if a prior art device performs all the functions recited in a claim, the prior art cannot anticipate the claim if there is any structural difference. In re Ruskin, 347 F.2d 843, 146 USPQ 211 (CCPA 1965). Claim 14 recites that first guide means guide the cylindrical elements at a height z1 and that second guide means guide the cylindrical elements at a height z2 that is higher than z1. Gibb et

al. does not disclose a second height being higher than the first. Gibb discloses that its pipe support member 28 is mounted "to raise or lower the pipe in order to accommodate pipes of different diameters." Col. 4, lines 65-68. Gibb also discloses that the pipe support member 28 is positioned to a correct elevation based on the pipe diameter relative to the female die 62. Col. 4, lines 67-68; Col. 5, lines 1-2. This suggests that the height is merely based on the size of the pipe and how it lays in the female die and Gibb still does not disclose anything about a height difference between a first and second guide means. Therefore, the adjustment in Gibb is to obtain an equal height between the elements. In contrast, the height difference in the present invention enables the cylindrical element to no longer be in contact with the first guide means.

Furthermore, the Gibb reference does not disclose that the second guide means is "downstream in the direction in which the cylindrical elements roll" nor does it disclose that the friction between the second guide means and the cylindrical element is lower than the friction between the first guide means and the cylindrical element as recited by claim 14. The Gibb reference discloses that the pipe support member contains anti-friction housings. Col. 7, lines 64-68. However, the last step in the operation of the Gibb invention involves the forming of an arcuate radially-extending locking projection 30a at female die 62. The Gibb invention would fail to operate if a cylindrical element was no longer in contact with its female die 62 because the purpose of the Gibb invention is to form an arcuate radially-extending locking projection 30a. Therefore, it is unclear how the female die 62 can be considered the first guide means. In addition, the friction in the female die 62 is not

disclosed, so a comparison between the friction at the two guide means is not possible. Because the Gibb reference does not disclose a height difference between the first and second guide means and because the Gibb reference does not disclose a difference in friction between a first and a second guide means, the Gibb reference fails to anticipate all of the elements of the present invention. Therefore, claim 14 is allowable over the Gibb reference and it is respectfully requested that the rejection be withdrawn. Accordingly, the rejections of claims 15-20 and 24-25 should also be withdrawn. Each of these claims are dependent on claim 14 and thus should be allowable because of the aforementioned reasons. Applicant would also like to thank the Examiner for recognizing that claims 19-20 and 24-26 contain allowable subject matter.

Claim 21, which depends on claim 14, is patentable for at least the same reasons claim 14 is patentable. Furthermore, amended claim 21 is allowable because it recites that the support comprises a lateral adjustment system that moves the cylindrical element for the assembly. In contrast, the Gibb reference discloses only that a plate 24 can be slid axially, where the plate 24 is normally located at one-half the length of the particular length of pipe from the area to be worked on. Col. 4, lines 52-61. However, the Gibb reference fails to disclose structure moving a cylindrical element in a direction perpendicular to the direction in which the cylindrical elements roll. The Gibb reference only changes the position of a plate 24, but does not move the cylindrical element, as recited by the current amendment to claim 21. Therefore, claim 21 is allowable over the Gibb reference and it is respectfully requested that the rejection be withdrawn.

Claim 22, which depends on claim 14, is patentable for at least the same reasons claim 14 is patentable. Furthermore, claim 22 is allowable because it recites that the support comprises means capable of adjusting the difference between the height z1 and the height z2. In contrast, the Gibb reference discloses only that the pipe support member 28 uses a post 26 to raise or lower the pipe to accommodate pipes of different diameters in correct elevation relative to the female die 62. Col. 4, lines 63-68. However, the Gibb reference only discloses adjustment for diameters of the cylindrical element and the Gibb reference does not disclose anything about a height difference. In contrast, the height difference in the present invention enables the cylindrical element to no longer be in contact with the first guide means. Therefore, claim 22 is allowable over the Gibb reference and it is respectfully requested that the rejection be withdrawn.

Claim 23, which depends on claim 14, is patentable for at least the same reasons claim 14 is patentable. Furthermore, claim 23 is allowable because it recites that the difference in height z1 and the height z2 is approximately 0.5mm. In contrast, the Gibb reference does not disclose any differences in height between the first and second guide means, as already stated. Therefore, claim 23 is allowable over the Gibb reference and it is respectfully requested that the rejection be withdrawn.

Claim 26, which is a method claim depending from claim 14, is patentable for at least the same reasons claim 14 is patentable. Furthermore, claim 26 is allowable because it recites method limitations that are not present in the Gibb reference. The Gibb reference only discloses that one type of guiding is occurring,

over the pipe support assembly 28. Once the cylindrical element reaches the female die 62, no other guiding will occur. Furthermore, the Gibb reference fails to disclose any other area of the apparatus where guiding would occur because the female die 62 is used to form a locking projection. Because the Gibb reference does not disclose a step of secondary guiding and because the Gibb reference does not disclose a step where there is a difference in friction between a first and a second guide means, the Gibb reference fails to anticipate all of the elements of claim 26. Therefore, claim 26 is allowable over the Gibb reference and it is respectfully requested that the rejection be withdrawn.

It is respectfully requested that the rejection of claims 17, 25, and 26 by obviousness from the Gibb et al. reference (Pat. No. 4,470,291) in view of the Obara et al. reference (Pat. No. 5,843,369) under 35 U.S.C. §103 be withdrawn. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art. In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

There is no suggestion from the prior art to combine the Gibb reference with the Obara reference. Each of the references serve very different purposes. The Obara reference details a specific composition and method of manufacturing stainless steel for use as an anti-friction bearing. It is unclear how this invention could be combined with the Gibb reference, which is directed towards forming arcuate radially-extending locking projections 30a. Furthermore, nothing in the Gibb reference is directed towards the composition of the ball bearings, or the method of making the ball bearings, as recited by claim 17.

Even if a motivation to combine was present, the Gibb reference and the Obara reference do not teach or suggest each of the elements recited in claim 14, which claim 17 depends on. With respect to claim 14, Gibb and Obara fail to disclose a height difference between the first and second guide means and do not disclose a difference in friction between the first and second guide means. Claim 14 recites that first guide means guide the cylindrical elements at a height z1 and that second guide means guide the cylindrical elements at a height z2 that is higher than z1. Gibb et al. does not disclose a second height being higher than the first. Gibb discloses that its pipe support member 28 is mounted "to raise or lower the pipe in order to accommodate pipes of different diameters." Col. 4, lines 65-68. Gibb also discloses that the pipe support member 28 is positioned to a correct elevation based on the pipe diameter relative to the female die 62. Col. 4, lines 67-68; Col. 5, lines 1-2. This suggests that the height is merely based on the size of the pipe and how it lays in the female die and Gibb still does not disclose anything about a height difference. Therefore, the adjustment in Gibb is to obtain an equal height between

elements. In contrast, the height difference in the present invention enables the cylindrical element to no longer be in contact with the first guide means. Obara contains no similar structure relating to a height difference between a first and second guide means. The Obara reference is only directed to the composition of the ball bearing.

Furthermore, the Gibb reference does not disclose that the second guide means is "downstream in the direction in which the cylindrical elements roll" or that the friction between the second guide means and the cylindrical element is lower than the friction between the first guide means and the cylindrical elements as recited by claim 14. The Gibb reference discloses that the pipe support member contains anti-friction housings. Col. 7, lines 64-68. However, the last step in the operation of the Gibb invention involves the forming of an arcuate radially-extending locking projection 30a at female die 62. The Gibb invention would fail to operate if a cylindrical element was no longer in contact with its female die 62 because the purpose of the Gibb invention is to form an arcuate radially-extending locking projection 30a. Therefore, it is unclear how the female die 62 can be considered the first guide means. In addition, the friction in the female die 62 is not disclosed, so a comparison between the friction at the two guide means is not possible. The reduced friction in the second guide means allows the phenomenon of the tearing off of metallic particles from the cylindrical element to be greatly reduced. The Obara reference does not disclose a second guide means containing less friction than a first guide means because the Obara reference is only directed to the composition of the ball bearing. Accordingly, claims 25-26 will also not be

anticipated because they depend from claim 14.

It is respectfully requested that the rejection of claims 23, 25, and 26 as being obvious from the Gibb et al. reference (Pat No. 4,470,291) based on a matter of design choice within the ordinary skill of one in the art under 35 U.S.C. §103 be withdrawn. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art. In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). The prior art must provide a motivation or reason, without the benefit of appellant's specification, to make the necessary changes in the reference device. Ex parte Chicago Rawhide Mfg. Co., 223 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984). General conclusions concerning what is "basic knowledge" or "common sense" to one of ordinary skill in the art without specific factual findings and some concrete evidence in the record to support these findings will not support an obviousness rejection. In re Zurko, 258 F.3d 1379, 1386, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001). The examiner must provide specific factual findings predicated on sound technical and scientific reasoning to support his or her conclusion of common knowledge. In re Soli, 317 F.2d 941, 946, 37 USPQ 797, 801 (CCPA 1963).

With regards to the present invention, it is respectfully suggested that there is

no motivation from the prior art to alter the Gibb reference with the limitations of claim 23, 25, or 26. Each of these claims depend on independent claim 14. The Gibb reference only discloses that its pipe support member 28 is mounted "to raise or lower the pipe in order to accommodate pipes of different diameters" and that the pipe support member 28 is positioned to a correct elevation based on the pipe diameter relative to the female die 62. Col. 4, lines 65-68; Col. 5, lines 1-2. This suggests that the height is merely based on the size of the pipe and how it lays in the female die and Gibb still does not disclose anything about a height difference between a first and second guide means. This demonstrates that the Gibb reference is concerned with only adjusting its height based on the size of the cylindrical element. The present invention uses a height difference to ensure that the cylindrical element is no longer in contact with the first guide means. Because the prior art does not suggest the desirability of a difference in height between the first guide means and the second guide means, there is no motivation to alter the Gibb reference. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

Even if a motivation to alter the Gibb reference was present, it is respectfully suggested that the Gibb reference does not teach or suggest each of the elements recited in claim 23. Claim 23 recites that the difference in height z1 and the height z2 is approximately 0.5mm. The Gibb reference fails to disclose a difference in height between the first guide means and the second guide means, as required by claim 14, which claim 23 depends on. In contrast, the Gibb reference discloses only that the pipe support member 28 uses a post 26 to raise or lower the pipe to accommodate pipes of different diameters in correct elevation relative to the female

die 62. Col. 4, lines 63-68. However, the Gibb reference only discloses adjustment for diameters of the cylindrical element and the Gibb reference does not disclose anything about a height difference. In contrast, the height difference in the present invention enables the cylindrical element to no longer be in contact with the first guide means. Because the Gibb reference does not disclose or suggest any difference in height, the specific 0.5mm difference is not obvious to one skilled in the art.

Furthermore, the Gibb reference does not disclose that the second guide means is "downstream in the direction in which the cylindrical elements roll" nor does it disclose that the friction between the second guide means and the cylindrical element is lower than the friction between the first guide means and the cylindrical element as recited by claim 14. The Gibb reference discloses that the pipe support member contains anti-friction housings. Col. 7, lines 64-68. However, the last step in the operation of the Gibb invention involves the forming of an arcuate radially-extending locking projection 30a at female die 62. The Gibb invention would fail to operate if a cylindrical element was no longer in contact with its female die 62 because the purpose of the Gibb invention is to form an arcuate radially-extending locking projection 30a. Therefore, it is unclear how the female die 62 can be considered the first guide means. In addition, the friction in the female die 62 is not disclosed, so a comparison between the friction at the two guide means is not possible. Accordingly, claim 14 is allowable over the Gibb reference and it is respectfully requested that the obviousness rejection for claims 23, 25, and 26 be withdrawn.

In view of the foregoing, it is respectfully submitted that the above-identified application is in condition for allowance, and allowance of the above-identified application is respectfully requested. If, for some reason, the Examiner perceives some issue that prevents an immediate allowance of the subject application, the Examiner is explicitly invited to contact the undersigned attorney to discuss such impediment.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. 36880.

Respectfully submitted,

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